



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,622	08/18/2003	Eugene Feng	2102397-992800	4461

26379 7590 11/14/2006

DLA PIPER RUDNICK GRAY CARY US, LLP
2000 UNIVERSITY AVENUE
E. PALO ALTO, CA 94303-2248

EXAMINER

FRANKLIN, RICHARD B

ART UNIT PAPER NUMBER

2181

DATE MAILED: 11/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/643,622

Applicant(s)

FENG, EUGENE

Examiner

Richard Franklin

Art Unit

2181

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

FRITZ FLEWING
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1 – 9 are pending.

Response to Appeal Brief

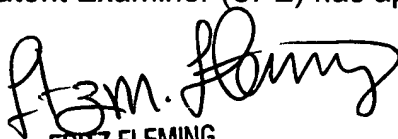
2. In view of the Appeal Brief filed on 25 August 2006, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:


FRITZ FLEMING
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100
11/9/2006

Drawings

3. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

- The acronym "FWH" is not defined in the specification.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1 – 2, 7, and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6,851,014 (hereinafter Chang).

As per claim 1, Chang teaches a memory device (Figure 9 Item 900) for interfacing with an integrated circuit communicating via a communication bus (Figure 9 Items 203 and 205), the device comprising a decoding circuit (Figure 9 “Protocol Detection CKT”) for receiving communication signals received via the communication bus, for decoding the communication signals and for generating a plurality of protocol signals (Figure 9 “SEL,” Col 2 Line 65 – Col 3 Line 1) in response thereto; a protocol select circuit for receiving the plurality of signals (Figure 9 Item 902); an array of memory cells (Figure 9 Item 202); a controller circuit for controlling the operation of the array of memory cells (Figure 9 Items 206 and 208); the protocol select circuit for configuring the controller circuit in response to the plurality of protocol signals (Col 8 Lines 41 – 48).

As per claim 2, Chang also teaches wherein the memory cells are non-volatile memory cells (Col 4 Lines 30 – 34).

As per claim 7, Chang teaches a memory device (Figure 9 Item 900) for interfacing with an integrated circuit communicating via an LPC bus, the circuit generating a start field (Col 5 Lines 54 – 59), the device comprising a decoding circuit (Figure 9 “Protocol Detection CKT”) for receiving the start field and for generating a plurality of protocol signals (Figure 9 “SEL,” Col 2 Line 65 – Col 3 Line 1); a protocol select circuit for receiving the plurality of protocol signals (Figure 9 Item 902); an array of non-volatile memory cells (Figure 9 Item 202, Col 4 Lines 30 – 34); a controller circuit for controlling the operation of the array of non-volatile memory cells (Figure 9 Items 206 and 208); the protocol select circuit for configuring the controller circuit in response to the plurality of protocol signals (Col 8 Lines 41 – 48).

As per claim 9, Chang also teaches wherein the plurality of protocol signals represent protocol for LPC communication and for FWH communication (Col 5 Lines 44 – 48).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3, 5, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,851,014 (hereinafter Chang) in view of US Patent No. 4,789,984 (hereinafter Swartz). ~~"Micro-Electronics—Digital and Analog Circuits and Systems" by Jacob Millman (hereinafter Millman).~~

As per claim 3, Chang teaches the memory device as described per claim 2 (See rejection of claim 2 above). Chang also teaches wherein the protocol select circuit is a multiplexer.

Chang does not teach wherein the protocol select circuit is a volatile storage element.

However, Swartz teaches a multiplexer that includes input latches (Figure 4 Items 4A1 and 4A2) and an output buffer (Swartz; Figure 4 Item 404, Col 5 Lines 59 – 64). Both input latches and output buffer are volatile storage elements.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Chang to include the volatile storage element because doing so allows the circuit to simultaneously sample or acquire new input data from the inputs (Swartz; Col 6 Lines 5 – 7).

PMZ
11/9/2006

As per claim 5, Swartz also teaches wherein the latches are flip-flops (Swartz; Col 5 Lines 14 – 19).

As per claim 8, Chang teaches the memory device as described per claim 7 (See rejection of claim 7 above). Chang also teaches wherein the protocol select circuit is a multiplexer.

Chang does not teach wherein the protocol select circuit is a volatile storage element.

However, Swartz teaches a multiplexer that includes input latches (Figure 4 Items 4A1 and 4A2) and an output buffer (Swartz; Figure 4 Item 404, Col 5 Lines 59 – 64). Swartz also teaches wherein the latches are flip-flops (Swartz; Col 5 Lines 14 – 19).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Chang to include the flip-flops because doing so allows the circuit to simultaneously sample or acquire new input data from the inputs (Swartz; Col 6 Lines 5 – 7).

7. Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,851,014 (hereinafter Chang) in view of US Patent No. 4,789,984 (hereinafter Swartz) and further in view of "Micro-Electronics – Digital and Analog Circuits and Systems" by Jacob Millman (hereinafter Millman).

As per claim 4, Chang in combination with Swartz teaches the memory device as described per claim 3 (See rejection of claim 3 above).

Chang in combination with Swartz does not teach wherein the volatile storage element is a register.

However, Millman teaches wherein a volatile storage element is a register (Millman; Pages 215 – 220 Section 7-4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Chang in combination with Swartz to include the register because doing so allows for the storage of more than one bit at a time (Millman; Page 215 Paragraph 1).

As per claim 6, Chang in combination with Swartz teaches the memory device as described per claim 3 (See rejection of claim 3 above).

Chang in combination with Swartz does not teach wherein the volatile storage element is an SRAM.

However, Millman teaches wherein a volatile storage element is a Static RAM (SRAM) (Millman; Pages 291 – 293 Section “Static MOS RAM”).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Chang in combination with Swartz to include the SRAM because doing so allows for the storage of kilobits of data at a time (Millman; Page 293 Paragraph 3).

Art Unit: 2181

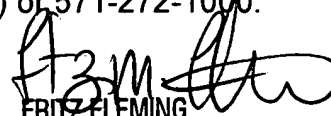
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Franklin whose telephone number is (571) 272-0669. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fritz Fleming can be reached on (571) 272-4145. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Richard Franklin
Patent Examiner
Art Unit 2181


FRITZ FLEMING
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

11/9/2006